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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,905	03/07/2002	Sarah Jane Mears	EL-0438	3005

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EXAMINER

KOPEC, MARK T

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/070,905	MEARS, SARAH JANE	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mark Kopec	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

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This application is a 371 of PCT/US00/27415 (10/05/00).

Claims 1-15 are pending.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for

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establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The examiner makes the following observation(s) regarding claim construction:

Component (c) requires tin in the form of **metallic** Sn or Sn **alloy** (page 6 of the instant specification). Tin compounds, such as SnO<sub>2</sub>, are outside the scope of component (c).

The instant claims require **both** tin (component (c)) **and** additional electrically conductive materials (component (a)). There is no per se rule that "double inclusion" is improper in a claim. In re Kelly, 305 F.2d 909, 916, 134 USPQ 397, 402 (CCPA 1962) ("Automatic reliance upon a rule against double inclusion' will lead to as many unreasonable interpretations as will automatic reliance upon a rule allowing double inclusion'. The governing consideration is not double inclusion, but rather is what is a reasonable construction of the language of the claims."). Older cases, such as Ex parte White, 759 O.G. 783 (Bd. App. 1958) and Ex parte Clark, 174 USPQ 40 (Bd. App. 1971)

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should be applied with care, according to the facts of each case. The facts in each case must be evaluated to determine whether or not the multiple inclusion of one or more elements in a claim gives rise to indefiniteness in that claim. The mere fact that a compound may be embraced by more than one member of a Markush group recited in the claim does not lead to any uncertainty as to the scope of that claim for either examination or infringement purposes.

Claims 1-3 and 6-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 61-066303.

JP '303 discloses:

AB - J61066303 Paste is composed of 49-91 wt% Ag, Pd, Au, Pt noble metal powder and 6-20 wt% glass frit and 3-31 wt% at least 1 kind of Zn, Al, Sn, which are bonded by binder.

- ADVANTAGE - Electroconductive paste is directly printed on surface of conductor, surface is not oxidised in baking process in air and appropriate conductivity is obtd.
- In an example, Ag powder 12 g+Zn powder 5 g+CaO-BaO-SiO2 glass frit 19 g+ethylcellulose binder 6 g+alpha-terpineol 33 g were kneaded in 3 roller mill to give electro-conductive paste. In conventional method for preventing oxidn. base metal part was Ni-plated and then noble metal was plated on the Ni-plated part, so that process was complicated and cost was raised up. Even when sample was baked in oxidising atmos. electric resistance was stable (not increased). Tensile strength was also stable.

The reference either specifically or inherently meets each of the claimed limitations.

In the event that any minor modifications are necessary to meet the claimed limitations, such as minor variation in percentages or selection of particular particle size, such modifications are well within the purview of the skill artisan.

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In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Claims 4-5 are allowed. The prior art of record does not disclose or suggest Sn-containing alloy in combination with the additional claimed components.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mark Kopec  
Primary Examiner  
Art Unit 1751

MK

February 18, 2004